

元智大學 101 學年度研究所 碩士班 招生試題卷

系(所)別： 先進能源碩士學位學程

組別： 能源材料組

科目： 科技英文

用紙第 1 頁共 2 頁

● 不可使用電子計算機

第一部份：GRE (30%)

1. A positive integer with exactly two different divisors greater than 1 must be (A) a prime (B) an even integer (C) a multiple of 3 (D) the square of a prime (E) the square of an odd integer
2. By weight, liquid A makes up 7.0 percent of solution I and 14.5 percent of solution II. If 3 grams of solution I is mixed with 2 grams of solution II, then liquid A accounts for what percent of the weight of the resulting solution? (A) 6.09% (B) 10% (C) 10.75% (D) 21.5% (E) 50%
3. If a and b are integers and $a-b=6$, then $a+b$ CANNOT be (A) 0 (B) less than 6 (C) greater than 6 (D) an even integer (E) an odd integer
4. In a certain country, a person is born every 3 second and a person dies every 10 seconds. Therefore, the birth and death rates account for a population growth rate of one person every (A) $3\frac{1}{3}$ sec (B) $4\frac{2}{7}$ sec (C) 7sec (D) $11\frac{2}{3}$ sec (E) 13sec
5. The charge for a telephone call made at 10:00 a.m. from City Y to City X is \$0.50 for the first minute and \$0.34 for each additional minute. At these rates, what is the difference between the total cost of three 5-minute calls and the cost of one 15-minute call? (A) \$0.00 (B) \$0.16 (C) \$0.32 (D) \$0.48 (E) \$1.00
6. The rectangular floor of a warehouse is 300 feet wide and 350 feet long. If the width remains fixed, how many additional feet would have to be added to the length to increase the floor area by 20 percent? (A) 42 (B) 50 (C) 65 (D) 70 (E) 84
7. Among all isosceles triangles RST having the measure of angle S equal to 40° , what is the largest possible measure for angle R ? (A) 40° (B) 70° (C) 90° (D) 100° (E) It cannot be determined from the information given.
8. If $\frac{2}{3}$ of the number of women attending a certain dance is equal to $\frac{1}{2}$ the number of men attending, what fraction of those attending are women? (A) $\frac{2}{5}$ (B) $\frac{3}{7}$ (C) $\frac{5}{7}$ (D) $\frac{3}{4}$ (E) $\frac{5}{6}$
9. If n is an integer divisible by 6 but not by 4, then which of the following CANNOT be an integer? (A) $\frac{n}{2}$ (B) $\frac{n}{3}$ (C) $\frac{n}{6}$ (D) $\frac{n}{10}$ (E) $\frac{n}{12}$
10. An emergency vehicle travels 10 miles at a speed of 50 miles per hour. How fast must the vehicle travel on the return trip if the round-trip travel time is to be 20 minutes? (A) 55 mph (B) 60 mph (C) 65 mph (D) 70 mph (E) 75 mph

第二部份：詞彙和結構 (30%)

1. Mary and Jane _____ turns taking care of their sick father, who has been bedridden for roughly ten years.
(A). take (B). make (C). set (D). give
2. Mary's investment in the stock market _____ millions of dollars every year. No wonder she can afford such a big house.
(A). brings in (B). takes in (C). brings up (D). takes up
3. These kids were so cute and lovely that the old man decided to give them an apple _____. (A). respectfully (B). respectably (C). respectfully (D). respectively
4. Quarrels often _____ from trifles; they can be avoided if we can all learn to be open-minded.
(A). arouse (B). arise (C). rise (D). raise
5. John hardly ever means what he says. I don't think he will tell the truth this time, _____. (A). doesn't he (B). does he (C). will he (D). do I
6. Jane was in such a hurry to get to the station that I _____ had a chance to talk to her. (A) definitely (B) barely (C) merely (D) truly
7. The meeting is expected to take place _____ the morning of December 11 next year. (A). at (B). for (C). in (D). on
8. It was not until we finished packing _____ we set out for our destination. (A). which (B). then (C). that (D). did
9. I hate it when any staff member delays _____ what he or she is supposed to do immediately. (A). to do (B). doing (C). do (D). to have done
10. No one wants to _____ that small island, knowing that it will be used as a dumping site for nuclear waste.
(A). live (B). reside (C). dwell (D). inhabit

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第三部份 Cloze (20%)

Not long ago, moviegoers were constantly interrupted by the sound of people's cell phones ringing during a movie, play, or concert. During romantic, exciting, or even sad scenes, someone would yell "Wei (喂)?" into his phone, (1) those all around him. Finally, some cell phone companies themselves (2) advertisements before a movie began, showing how disturbing one's personal cell phone ring can be in public. Today, most people turn their cell phones (3) when entering a movie theater. This is good, but many others still let their cell phones ring in libraries, on public transportation, in restaurants, and even in hospitals. This behavior shows (4) for others and should be forbidden. It is time people (5) that when in public, cell phones should be either turned off or set on the quieter vibrator mode. After all, public spaces are not one's private home.

- (A) soothing(B) pleasing(C) imitating (D) irritating
- (A) published(B) laid(C) placed(D) announced
- (A) on(B) off(C) up(D) in
- (A) care(B) disregard(C) concern(D) respect
- (A) realized(B) realize(C) must realize(D) can realize

第四部份 閱讀 (20%)

Comic book characters are the latest stars to hit the big screen. Comic books have been popular since the 1930's. But today, people are losing interest in the magazines. Characters such as Superman have been in print for over 70 years. However, after so long, there aren't many stories left to tell. But there is still money to be made in movies. Since the 1950s, television programs and movies have been based on Superman, Batman, and others. Lately, we have seen a wave of these films and it is paying off. *Spider-Man* the Movie earned over US\$150 million in just its first week of release. But why the new interest by movie companies?

First there is already an existing fan base. Since comics have been around for so long, fans are both young and old. Second, these films are always action movies with lots of fighting, explosions and special effects. Action films often do well at the theater. Third, the marketing afterwards brings in huge returns. Dolls, costumes and video games create a huge income. Marvel, one of the biggest comic book companies, created over 4,700 comic characters. So movie makers won't be running out of ideas for a while.

- According to this passage, why are comic books losing popularity?
 - People are watching movies instead.
 - Comic book writers can't think of any new stories.
 - Kids are playing video games.
 - Action movies are very popular.
- The words "big screen" in line 1 is closest in meaning to.
 - the movie theater.
 - the TV screen.
 - lots of money.
 - large comic books.
- Why are movies based on comic book characters so popular?
 - People can buy costumes.
 - Many people enjoy watching action movies.
 - People aren't reading comic books anymore.
 - Superman is too old.
- Why does the author think movie companies are making these movies?
 - To make money.
 - To increase interest in comic books.
 - To attract attention.
 - Because they are easy to make.